

WHAT IS CLAIMED IS:

1. A process for preparing a coated granular detergent composition comprising the steps of:

- i) providing a granular detergent composition having granules containing detergent active materials;
- 5 ii) passing said detergent granules to a coating mixer;
- iii) providing a coating solution of a water soluble coating material selected from the group consisting of deterative surfactants, hydrotropes, and mixtures thereof to said coating mixer; and
- 10 iv) at least partially coating said granules in said coating mixer to form a coated detergent granular composition;

wherein said coated detergent composition has a geometric mean particle diameter of from about 400 microns to about 1500 microns with a geometric standard deviation of from about 1 to about 2.

2. The process as claimed in Claim 1, wherein said water soluble coating material comprises an anionic surfactant or precursor thereof.

3. The process as claimed in Claim 2, wherein said water soluble coating material comprises a hydrotrope selected from the group consisting of polyethylene glycols, polypropylene glycols, sulfonate salts and mixtures thereof.

4. The process as claimed in Claim 1 wherein said water soluble coating material is a mixture of an anionic surfactant and a hydrotrope in a ratio of anionic surfactant to hydrotrope of from about 95:5 to about 5:95.

5. The process of Claim 4 wherein;

- a) the anionic surfactant is selected from the group consisting of sodium linear alkyl benzene sulfonate, hydrophobic secondary alkyl sulfate and mixtures thereof; and
- 5 b) the hydrotrope is selected from the group consisting of sodium xylene sulfonate, alkyldiphenyloxide disulfonate having an alkyl group chain length of from C1-C10, and mixtures thereof; and

wherein the ratio of surfactant to hydrotrope is from about 70:30 to about 95:5.

6. The process as claimed in Claim 1, wherein said coating mixer is selected from the group consisting of low speed mixers, fluid bed mixers, and combinations thereof.

7. The process as claimed in claim 1 wherein said coating material further includes a detergent supplements such as brighteners, chelants, nonionic surfactants, co-builders and mixtures thereof.

8. The process as claimed in Claim 1 wherein said step of providing said aqueous coating solution further comprises the step of spraying said coating solution into said coating mixer.

9. The process as claimed in Claim 8 wherein the amount of water-soluble solution is from about 1% to about 30%, by weight, of the detergent composition.

10. The process as claimed in Claim 1 further comprising the steps of mixing said coated detergent granules with a flow control aid to adhere said flow control aid to the surface of said granules.

11. The process as claimed in Claim 10 wherein the flow control aid is an inorganic powder material and is selected from the group consisting of crystalline layered silicate, carbonate, sodium sulfate, aluminosilicate, magnesium silicate, calcium silicate, clay, and mixtures thereof.

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12. A process for preparing a coated granular detergent composition comprising the steps of:

i) providing a granular detergent composition having granules containing detergent active materials;

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ii) passing said detergent granules to a coating mixer;

iii) providing a coating solution of a water soluble coating material comprising an anionic deterative surfactants and precursors thereof to said coating mixer; and

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iv) at least partially coating said granules in said coating mixer to form a coated detergent granular composition.

13. The process as claimed in Claim 12 wherein said water soluble coating material further comprises a hydrotrope.

14. The process as claimed in Claim 13 wherein said water soluble coating material is a mixture of an anionic surfactant and a hydrotrope in a ratio of anionic surfactant to hydrotrope of from about 95:5 to about 5:95.

15. The process of Claim 14 wherein;

- a) the anionic surfactant is selected from the group consisting of sodium linear alkyl benzene sulfonate, hydrophobic secondary alkyl sulfate and mixtures thereof; and
- 5 b) the hydrotrope is selected from the group consisting of sodium xylene sulfonate, alkyldiphenyloxide disulfonate having an alkyl group chain length of from C1-C10, and mixtures thereof; and

wherein the ratio of surfactant to hydrotrope is from about 70:30 to about 95:5.

16. The process as claimed in Claim 12, wherein said coating mixer is selected from the group consisting of low speed mixers, fluid bed mixers, and combinations thereof.

17. The process as claimed in Claim 12 further comprising the steps of mixing said coated detergent granules with a flow control aid to adhere said flow control aid to the surface of said granules.

18. The process as claimed in Claim 17 wherein the inorganic powder material and is selected from the group consisting of crystalline layered silicate, carbonate, sodium sulfate, aluminosilicate, magnesium silicate, calcium silicate, clay, undersized detergent particles and mixtures thereof.

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19. A granular detergent composition produced by the process of Claim 1.

20. A granular detergent composition produced by the process of Claim 12.